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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/000,206	11/02/2001	Nicolo F. Machi	040-98-004GCIP	9126

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07/30/2003

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EXAMINER

QUASH, ANTHONY G

ART UNIT

PAPER NUMBER

2881

DATE MAILED: 07/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/000,206

Applicant(s)

MACHI, NICOLO F.

Examiner

Anthony Quash

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4,6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meyers [595]. As per claim 1, Meyers [595] teaches a light assembly comprising a thermally conductive housing having a bottom portion and a top portion, the housing being hollow, and a thermally conductive base, at least one light emitting diode (30) disposed at the base, the light emitting diode adapted to emit infrared light, the light being non-coherent and non-directional, at least one lens connected to the top portion of the housing, the lens (34) adapted infrared light to produce a beam of infrared light. See Meyer [595] abstract, fig. 2, columns 2-3, and col. 4 lines 25-40. However Meyer [595] does not explicitly state the lens being aspheric. Meyer [595] does teach the lens/lens assembly collimating the light. See Meyer [595] fig. 2, and col. 3 lines 55-65. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the lens assembly in Meyer [595], since it performs the same function as the aspheric lens in applicant's invention.

As per claim 2, Meyer [595] teaches all aspects of the claim except for specifically stating that housing and base be comprised of aluminum. Meyer [595] does teach that the base and housing can be comprised of metal. See Meyer [595] col.

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3 lines 25-35. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the housing and base be comprised of aluminum, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

As per claim 3, Meyer [595] teaches the housing being substantially cylindrical. See Meyer [595] figs. 1-3.

As per claim 4, Meyer [595] teaches the base being integrally connected to the housing. See Meyer [595] figs. 1-3.

As per claim 6, Meyer [595] teaches the lens (34) having a substantially flat inner surface and a convex outer surface. See Meyer [595] fig. 2.

Claim 7 is rejected as being dependent upon a previously rejected base claim. As per claim 9, Meyer [595] teaches all aspects of claim except for specifically stating that the peak emission of the light emitting diode being substantially maintained at about 880 nm. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the peak emission of the light emitting diode be substantially maintained at about 880 nm, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

Claims 5,10,11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meyers [595] in view Houseman [534]. As per claim 5, Meyers [595] teaches all aspects of the claim except that the aspheric lens has a focal point, and that the IR diode is slightly offset the focal point. Houseman [534] teaches that the aspheric lens

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has a focal point, and that the IR diode is slightly offset the focal point. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the IR diode is slightly offset from the focal point in the aspheric lens in order to reduce sensitivity to misalignment as taught in Houseman [534].

As per claim 10, Houseman [534] teaches that the power requirement for the light assembly is in the range from about 10 watts to about 20 watts. See Houseman [534] col. 3 lines 50-69.

As per claim 11, Houseman [534] teaches the light assembly being a unit located within a lamp head. See Houseman [534] col. 3 lines 50-69.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meyers [595] in view of Klapper [882]. As per claim 8, Meyers [595] teaches all aspects of the claim except that the assembly substantially maintains a predetermined operating temperature such that the peak emission of the light emitting diode is substantially maintained. However Klapper [882] teaches substantially maintaining a predetermined operating temperature such that the peak emission of the light emitting diode is substantially maintained. See Klapper [882] col. 4 lines 55-62. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide means for substantially maintaining the temperature in order to eliminate errors that would result from fluctuations in sensitivity due to fluctuations in the temperature of the assembly.

Claims 12-16,18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meyers [595] in view Klapper [882]. As per claim 12, Meyers [595] teaches a light

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assembly comprising a thermally conductive housing having a bottom portion and a top portion, the housing being hollow, and a thermally conductive base, at least one light emitting diode (30) disposed at the base, the light emitting diode adapted to emit infrared light, the light being non-coherent and non-directional, at least one lens connected to the top portion of the housing, the lens (34) adapted infrared light to produce a beam of infrared light. See Meyer [595] abstract, fig. 2, columns 2-3, and col. 4 lines 25-40. However Meyer [595] does not explicitly state the lens being aspheric. Meyer [595] does teach the lens/lens assembly collimating the light. See Meyer [595] fig. 2, and col. 3 lines 55-65. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the lens assembly in Meyer [595], since it performs the same function as the aspheric lens in applicant's invention. However, Meyer [595] does not explicitly state that at least one thermal electric cooler being connected to the IR diode. However, Klapper [882] does teach at least one thermal electric cooler being connected to the IR diode. See Klapper [882] col. 1 lines 10-21 and col. 4 lines 55-62. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to connect at least one thermal electric cooler to the IR diode in order to increase sensitivity as taught in Klapper [882].

As per claim 13, Klapper [882] teaches at least one thermal electric cooler between the base and the IR diode. See Klapper [882] col. 1 lines 10-21 and col. 4 lines 55-62.

As per claim 14, Meyer [595] teaches all aspects of the claim except for specifically stating that housing and base be comprised of aluminum. Meyer [595] does teach that the base and housing can be comprised of metal. See Meyer [595] col. 3 lines 25-35. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the housing and base be comprised of aluminum, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

As per claim 15, Meyer [595] teaches the housing being substantially cylindrical. See Meyer [595] figs. 1-3.

As per claim 16, Meyer [595] teaches the base being integrally connected to the housing. See Meyer [595] figs. 1-3.

As per claim 18, Meyer [595] teaches the lens (34) having a substantially flat inner surface and a convex outer surface. See Meyer [595] fig. 2.

Claim 19 is rejected as being dependent upon a previously rejected base claim.

As per claim 20, Meyers [595] teaches all aspects of the claim except that the assembly substantially maintains a predetermined operating temperature such that the peak emission of the light emitting diode is substantially maintained. However Klapper [882] does teach substantially maintaining a predetermined operating temperature such that the peak emission of the light emitting diode is substantially maintained. See Klapper [882] col. 4 lines 55-62. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide means for

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substantially maintaining the temperature in order to eliminate errors that would result from fluctuations in sensitivity due to fluctuations in the temperature of the assembly.

Claims 17,21,22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meyers [183] in view Klapper [882] and further in view of Houseman [534]. As per claim 17, Meyers [183] in view of Klapper [882] teach all aspects of the claim except that the aspheric lens has a focal point, and that the IR diode is slightly offset the focal point. Houseman [534] teaches that the aspheric lens has a focal point, and that the IR diode is slightly offset the focal point. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the IR diode is slightly offset from the focal point in the aspheric lens in order to reduce sensitivity to misalignment as taught in Houseman [534].

As per claim 21, Houseman [534] teaches that the power requirement for the light assembly is in the range from about 10 watts to about 20 watts. See Houseman [534] col. 3 lines 50-69.

As per claim 22, Houseman [534] teaches the light assembly being a unit located within a lamp head. See Houseman [534] col. 3 lines 50-69.

Conclusion

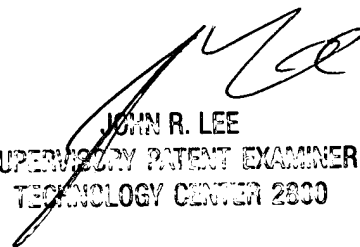
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Quash whose telephone number is (703)-308-6555. The examiner can normally be reached on M-F from 9 a.m. to 5 p.m.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teresa Arroyo, can be reached on (703)-308-7722. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-0956.



A. Quash 7/28/03.



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